

REMARKS:

Claim 2 has been canceled. Independent claims 1, 8 and 14 have been amended to incorporate some of the features or functional concepts of now canceled claim 2. The
5 amendments distinguish the prior art of record and place the application in condition for allowance.

Claims 1, and 3-15 are active in the application.

Claim 8 has been amended to change “dedicated processor” to AFCCU. This change makes the claim clearer and more consistent with the specification. It does not
10 affect the scope of the claims.

Claims 1 and 8 have been amended to specify that the present printer includes an AFCCU for preventing a printing run if the correct toner is not detected (claim 1) or loaded (claim 8) in the printer. This aspect of the invention will prevent costly printing errors. For example, if a print run of checks requiring magnetic ink is requested by the
15 processor, the printing of checks will be prevented or stopped if magnetic toner is not detected in the printer.

Similarly, claim 14 has been amended to include steps for determining if a compatible toner is installed in the printer, and preventing the printing if the compatible toner is not installed. In this way, printing with undesired toners is prevented.

20 The amendments to claims 1, 8, and 14 are supported by the present specification at page 14, lines 7-12. The section of the specification teaches that the “AFCCU does not allow transmission of print job data from any connected processor unless a printer is available, as indicated by data stored in board 23, which corresponds to the print parameters (e.g. particular toner) specified for the print job.”

25 Claims 1-15 were rejected under 35 USC 103(a) as being unpatentable over US Patent 5,049,937 to Takeda in view of US Patent 6,290,322 to Noguchi et al. This rejection is traversed by amendment.

A significant advantage of the present invention not found in the prior art is the ability to prevent printing with incorrect toner. For example, certain print jobs require
30 certain kinds of toner, such as certain colors, or magnetic toner. Printing with an incorrect

toner can be an expensive mistake. The present invention avoids these mistakes by preventing printing when the correct toner is not present in the printer.

In the present invention, the type of toner loaded in the printer is detected, and compared to the toner required for a particular print job, and, if the detected/loaded toner does not match the type of toner required for the print job, the printing is cancelled. In particular, the present invention includes an advanced function common control unit (AFCCU) for comparing the detected/loaded toner with the type of toner required. In the present invention, when an operator of the system requests a certain toner, the printing will not proceed unless the selected toner is available. Hence, in the present invention, costly human errors related to incorrectly loaded toner are avoided.

By comparison, Takeda teaches a copier that can detect the type of toner loaded in a machine, and detect the type of printing material (e.g. paper or transparency) loaded in the machine. The apparatus of Takeda, when in an "automatic toner selection mode", automatically selects the proper toner for the printing medium. If the medium is a clear transparency, then toner for clear transparency material is automatically selected; if the medium is paper, then toner for paper material is automatically selected. Alternatively, in Takeda, the toner can be selected manually. For example, Fig. 5 illustrates toner selection buttons 67 68 for transparent toner (for transparencies) and non-transparent toner (for paper), respectively. Fig. 6 illustrates how the apparatus of Takeda operates with regard to the buttons 67 68. Specifically, if transparent toner is selected with button 67 at step P21, then transparent toner is necessarily used. Similarly, if NON-transparent toner is selected with button 68 at step P21, then NON-transparent toner is necessarily used.

However, the manual input option necessarily creates the possibility of operator error. Specifically, the operator can select a toner that is not loaded in the machine, and, in this case, Takeda is silent. Takeda is silent with regard to the operation of the printer in the case when the operator-selected toner is not present. Nowhere does Takeda teach or suggest that printing can be prevented if the operator selected toner is not detected or loaded in the printer, as required by claims 1 and 8 as amended. For example, if an incorrect type of toner is loaded (for example, if the operator selects non-transparency toner when only transparency toner is loaded in the machine), it is not at all clear that the apparatus of Takeda would or could prevent printing with the wrong toner. Takeda does

not teach or suggest any action when a toner is selected that is not loaded in the machine. Takeda does not teach or suggest a toner verification step, which would be necessary to prevent printing with an incorrect toner. By comparison, the present apparatus will necessarily verify the toner, and prevent printing when a the correct toner is not detected.

5 As noted in the specification, incorrect toner loading is a common cause of costly toner errors. The apparatus of Takeda cannot prevent such errors because Takeda does not teach that printing can or should be prevented when the wrong toner type is detected. Takeda does not teach toner verification when manual is selected manually by the operator.

10 In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1, and 3-15 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone
15 number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees for
20 the petition or for entry of this amendment to IBM's Deposit Account No. 09-0440.

Respectfully submitted,



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